

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-12. (Cancelled).
13. (Currently Amended) A method comprising:  
receiving a request for information by a cryptographic device; and  
proving in a single direct proof that a value was signed by a signature key without  
revealing the value, the single direct proof comprises a plurality of exponentiations of which all  
of the plurality of exponentiations are conducted using a fixed exponent ~~substantially~~ less in bit  
length than a bit length of a modulus (n), the plurality of exponentiations conducted are of the  
form  $h^t \bmod P$ , where h is a unique number, t is randomly chosen between an interval between 0  
and W, P is a prime number, and W is a number greater than 280.
14. (Original) The method of claim 13, wherein the bit length of the exponent being  
at most 160 bits in length.
15. (Original) The method of claim 14, wherein the modulus (n) is over 1000 bits in  
length.
16. (Original) The method of claim 13, wherein the bit length of the fixed exponents  
associated with the exponentiations are a constant value despite any increase in value of the  
modulus (n).
17. (Currently Amended) A platform comprising:  
a bus;  
a network interface card coupled to the bus; and  
a processor coupled to the bus; and  
a trusted platform module coupled to the processor, in response to a challenge received  
over the network interface card, the trusted platform module to perform a direct proof in order to

prove that the trusted platform module has a digital signature from a device manufacturer and the digital signature is valid without revealing the digital signature, the direct proof comprises a plurality of exponentiations each being conducted using an exponent having a bit length no more than one-half a bit length of a modulus (n). the plurality of exponentiations feature a format  $h^t \bmod P$ , where "h" is a unique number, "t" is randomly chosen number, and "P" is a prime number.

18. (Original) The platform of claim 17, wherein the direct proof performed by the trusted platform module is conducted with the bit length of each exponent associated with all of the plurality of exponentiations being at most 160 bits in length.

19. (Original) The platform of claim 17, wherein the direct proof performed by the trusted platform module is conducted with the bit length of each exponent associated with all of the plurality of exponentiations being a constant value despite any increase in value of the modulus (n).

20. (New) The platform of claim 17, where the plurality of exponentiations associated with the direct proof include the randomly chosen number "t" being between an interval between 0 and W, where W is a number greater than 280

21. (New) The platform of claim 17, wherein the bit length of the exponent being less than one-eighth the bit length of the modulus (n).

22. (New) The method of claim 13, wherein the bit length of the exponent being less than one-eighth the bit length of the modulus (n).